

# FRAMINGHAM RADIO CLUB

## W 1 G L A

FRAMINGHAM, MASS. 01701

Meetings, 2nd Thursday of month, KEEFE VOCATIONAL SCHOOL,  
750 WINTER STREET, FRAMINGHAM, MASS. ROOM 201  
MEMBER OF THE AMATEUR RADIO NEWS SERVICE

MARCH 1974

### ELECTED OFFICERS

PRESIDENT	JEFF SLAMIN	W1M2C
VICE-PRES.	TONY LASCALE	W1MTI
TREASURER	JIM BABISH	K1UUM
SECRETARY	ENZO ROTATORI	W1PYF

The February FRC meeting was highlighted by a showing of slides by Norm W1MRR of our recent trip to the ARRL in Newington, Conn. along with some really great slides from the past two Field Day events.

Attendance continues to be good--five guests were introduced, Richard Feldman, Jan Werner, Charlie Stoner, Jr., Cheryl and George Kearsley.

Our next meeting will be Thursday, March 14, 8 PM in room 201 at Keefe Vocational School. Please be there a little earlier so that the meeting can start on time. Thanks to Warren for donating the door prize for the past two meetings. (Warren W1ERI) If you have anything that you care to donate to the Club as a door prize, please bring it to the meeting Thursday night. We still need your QSL card for the Club's collection.

Our treasurers report shows a balance of \$1325.61 representing a total of U.S. Savings Bonds and cash.

The proposed transmitter hunt was postponed due to the lack of mobile equipment.

We have received permission to use the Drill Shed off Union Avenue, behind the Framingham Police Station for our annual auction. We plan on having this gala affair on Saturday, March 30. Many more details at the next meeting.

A letter has been written to the manager of the Natick MALL asking his permission to set up a "live" display of ham gear in the Mall on some Saturday in May. We feel that the exposure will benefit the Club and Ham radio. We will need helpers to staff and operate the various equipment.

Fourteen members and guests of the FRC toured WCVB-TV Channel 5 in Needham, Mass. on Saturday, February 23. We were shown how the 11:30 AM news broadcast was put together and surprisingly the large number of behind the scenes staff that is required. We visited the various studios and found most impressive the TV camera (cost of \$80,000 each!) We viewed the entire half-hour telecast from behind the control console and saw first-hand the team work and coordination between the director and five associates.

\*\*\*\*\*

#### FRAMINGHAM RADIO CLUB RAG CHEW NET -

Since the FRC net was formed last October we have had 29 different stations check in from three states, Mass. N.H, and Rhode Island. Many thanks to the "regular checkins". The FRC Rag Chew Net Certificate is now ready and five were awarded at the February meeting to Tony WALMTI, Skip WALQDY, Al WALUDY, Warren WIKAN and Enzo WALPYF.

In order to qualify for this handsome certificate you need only check into the Net 10 times in a twelve month period. Skip WALQDY, has been appointed net manager and will log all stations checking in. Net control operators have been Mac WALIGL, Tony WALMTI and Enzo WALPYF. Anyone else wishing to handle net control should just make it known. This is an informal rag Chew Net and guests are invited to check in. Net night is every Wednesday, 9PM, at or about 28.600MHz. Let's keep 10 meters active!

\*\*\*\*\*

#### REMEMBER DAN. ?

The Club received a very nice letter from Dan Giro W1CTR who now lives in Westbrook, Maine. Dan continues to be a paid member of our organization although he lives in the far off north land. His letter will be available at the Club meeting for all to read. He really enjoys our newsletter and has made copies for his Ham pals.

We would like to congratulate Dan on recently receiving his 40 year pin from the ARRL. He will try to get to one of our spring meetings if he can get enough gas. Hi-Hi!

Here is a bit of nostalgia, Dan. The following is taken from a 1937 FRC Newsletter:

"CTR, Dan Giro Secy-Treas of Framingham Radio Club still running around with that ever popular smile. Danny is in charge of prizes and will be glad to accept anything from a gridleak to a fractured Xtal come what may.

and

Dan Giro W1CTR is still trying to make his RK20 work at least as good as his 210 did. He hasn't had much luck so far tho. Maybe the tube is no good Dan." Hope this brings back fond memories Dan, sorry about spelling your name incorrectly but I copied it as it was printed 37 years ago. 73's Dan

\*\*\*\*\*

#### QSL CARDS

Remember to bring a QSL card to the next meeting. Members cards will be displayed at each meeting.

BUY IT RIGHT

How does one go about buying his rig and other related equipment for his shack?

Since I recently experienced this I thought that I would share my system in this newsletter.

My first decision was to purchase an already built, good quality rig. I chose not to purchase intermediate type equipment and have to trade up in a year or two to a better rig because of the depreciation loss with that sort of move.

After deciding that I wanted Drake equipment, I selected the exact model and related equipment: new Drake TR4C transceiver, AC4 Power supply, MS-4 Speaker, #729SRD microphone, Ham-M rotator, 100' RG/8U, 100' rotor cable for Ham-M, and a TA36 Mosley beam antenna. All equipment specified as new.

I then looked in QST and 73 Magazine and listed ten companies that sold this equipment. I wrote a brief note to each of these companies asking for the best price quote for all the equipment listed. In the note, I was sure to indicate that I was a "serious buyer" and that I would be placing my order with the company which could offer the best price and service within four weeks.

I received nine replies. I then call a Mass. supplier of this equipment and asked for price quotes on the same equipment. After comparing all prices, I selected the three lowest quotes.

I wrote to the company with the lowest price and asked if they would go any lower on their quote. At the same time I wrote to companies two and three stating that I was quoted \$\_\_\_ for this package deal by another company and can they top that offer. Indicate that you are anxious to place your order and would they reply promptly.

When you receive the replies, compare prices and make your decision.

Some other points to consider in your communications with these various companies:

1. If you will be paying cash (certified check), then say so in your first letter. It does help in bargaining. However, many companies do offer credit plans.

2. Freight charges-Ask if shipping charges are pre-paid. All my equipment was shipped pre-paid via UPS except my beam antenna which was shipped via truck, common carrier, pre-paid also.

3. State sales tax-If gear is purchased in Mass., consider the 3% sales tax as part of your over-all cost. Equipment purchased out of State and shipped to Mass is not taxed.

4. For those charging their purchase, I would suggest that they look into borrowing on their life insurance (providing you have enough equity in your insurance). Rates can be as low as 5%. Pay back is very flexible.

5. Do not try to trade equipment in, sell it yourself. Is it worth the effort? It was for me. Happy shopping.

Enzo WALPYF

## The Amateur's Code

### ONE

*The Amateur is Gentlemanly . . .* He never knowingly uses the air for his own amusement in such a way as to lessen the pleasure of others. He abides by the pledges given by the ARRL in his behalf to the public and the Government.

### TWO

*The Amateur is Loyal . . .* He owes his amateur radio to the American Radio Relay League, and he offers it his unswerving loyalty.

### THREE

*The Amateur is Progressive . . .* He keeps his station abreast of science. It is built well and efficiently. His operating practice is clean and regular.

### FOUR

*The Amateur is Friendly . . .* Slow and patient sending when requested, friendly advice and counsel to the beginner, kindly assistance and cooperation for the broadcast listener; these are marks of the amateur spirit.

### FIVE

*The Amateur is Balanced . . .* Radio is his hobby. He never allows it to interfere with any of the duties he owes to his home, his job, his school, or his community.

### SIX

*The Amateur is Patriotic . . .* His knowledge and his station are always ready for the service of his country and his community.

—PAUL M. SEGAL



# Framingham Radio Club Rag Chew Net

← Gold  
Border

This is to Certify that .....

has checked into the Framingham Radio Club  
Rag Chew Net Ten Times in a Twelve Month Period.

In Recognition of His Good Fellowship  
and Proper Amateur Radio Techniques

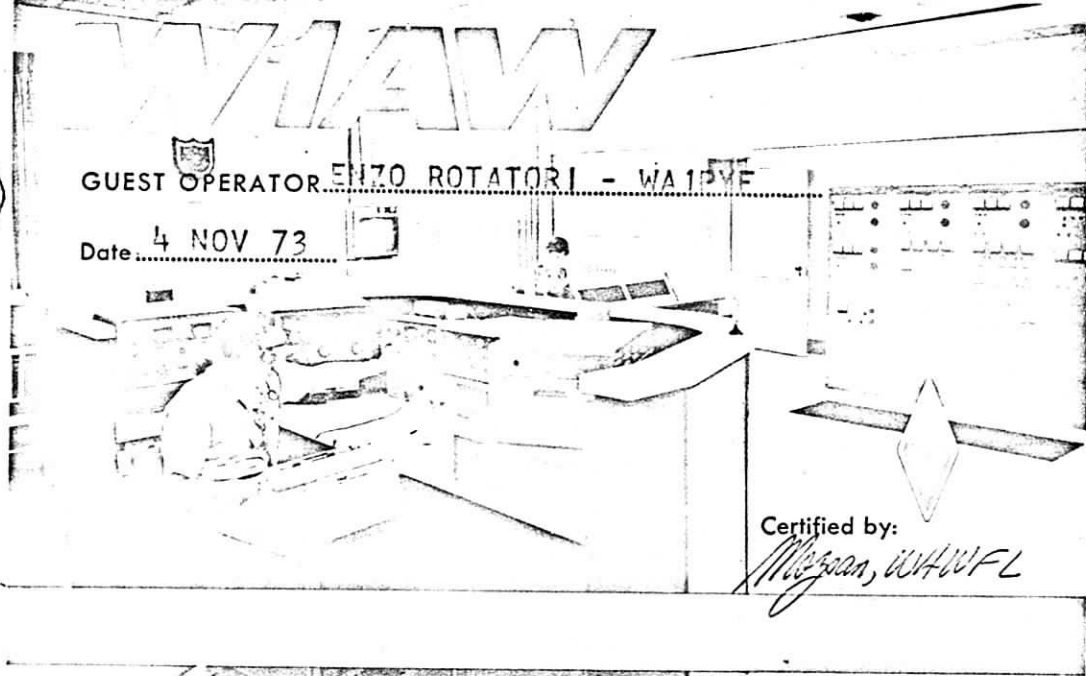
This Certificate is Granted to:

*DeClerck*

Date

Signed .....  
president

.....  
secretary



GUEST OPERATOR ENZO ROTATORI - WA1PYF

Date 4 NOV 73

HARRY J. DANNALS  
W2TUK, PRESIDENT  
  
CHARLES G. COMPTON  
W0BUO, FIRST VICE PRES.  
  
ROBERT W. DENNISTON  
W0DX, VICE PRES.  
  
ROEMER O. BEST  
W5QKF, VICE PRES.  
  
DAVID H. HOUGHTON  
TREASURER  
  
JOHN HUNTOON  
W1RW, SEC. & GEN. MGR.

QST  
OFFICIAL JOURNAL

Certified by:  
*Morgan, W4WFL*

Mr. Enzo F. Rotatori, WA1PYF  
550 Winter Street  
Framingham, Massachusetts 01701

Dear Enzo:

Your letter of last Fall bore fruit! Enclosed are 5 special cards for the FRC members who operated W1AW during your visit to Headquarters.

Thanks for the idea which led to the development of this new item.

73 to all.

Other operators receiving this special card were: Mac WA1IGL, Tony WA1MTI, Ed WA1AGQ and Vic W1BFF.

Sincerely yours,

Ellen White, W1YL  
Deputy Communications Manager

EW/fr

encl.

## THIS AND THAT

As of March 2, 1974 the cost of first class mail will increase from 8¢ to 10¢ per ounce. Any one having envelopes at QSL Bureaus should up grade the postage to meet the new requirements.

Before going into Boston on some particular Friday to take your general, you had better call the FCC office in the Customs Building. I understand that the code requirement is only given on Wednesdays now.

Chess net meets on 80 meters (3.928MHz) Monday through Friday at 7:30 PM. Also on Saturday and Sunday at 11 AM. Listen in and hear what they have to offer.

The Middlesex Radio Club will have their auction in April, the exact date to be announced at some future date.

A real fine newsletter in which to buy and sell ham equipment is the "EQUIPMENT EXCHANGE-HAM TRADER" P.O. Box 311, Sycamore, Illinois 60178. It is published Twice a month and subscription rates are 5 issues \$1, 24 issues \$4, or 50 issues for \$8.

A recent QSO made reference to a Symtek SABA 5 signal intensifier that brought even the weak ones in at "20" to "50" over. I mailed for the specs and they will be available at the next Club meeting.

The FRC is indeed fortunate to be exchanging Newsletters with the Saint Paul, Minnesota Radio Club. Their Club call is KØAGF and their very fine editor is Marv Mahre WØMGI. Many thanks to Marv who mailed several back issues to me. The Newsletter is entitled THE GROUND WAVE and it is certainly one of the best around.

A recent FRC Newsletter article was republished in the February issue of the AMATEUR RADIO NEWS SERVICE BULLETIN. This ARNS Bulletin is distributed nationally. The subject of the published article was equipment identification protection.

Since METRIC measurements are gaining in popularity, it was felt that a Metric Conversion card would be appropriate.

Approximate Conversions From Metric Measures				Inches	
Symbol	When You Know	Multiply by	To Find	Symbol	
<b>LENGTH</b>					
mm	millimeters	0.04	inches	in	
cm	centimeters	0.4	inches	in	
m	meters	3.3	feet	ft	
m	meters	1.1	yards	yd	
km	kilometers	0.6	miles	mi	
<b>AREA</b>					
cm <sup>2</sup>	square centimeters	0.16	square inches	in <sup>2</sup>	
m <sup>2</sup>	square meters	1.2	square yards	yd <sup>2</sup>	
km <sup>2</sup>	square kilometers	0.4	square miles	mi <sup>2</sup>	
ha	hectares (10,000 m <sup>2</sup> )	2.5	acres		
<b>MASS (weight)</b>					
g	grams	0.035	ounces	oz	
kg	kilograms	2.2	pounds	lb	
t	tonnes (1000 kg)	1.1	short tons		
<b>VOLUME</b>					
ml	milliliters	0.03	fluid ounces	fl oz	
l	liters	2.1	pints	pt	
l	liters	1.06	quarts	qt	
l	liters	0.26	gallons	gal	
m <sup>3</sup>	cubic meters	35	cubic feet	ft <sup>3</sup>	
m <sup>3</sup>	cubic meters	1.3	cubic yards	yd <sup>3</sup>	
<b>TEMPERATURE (exact)</b>					
°C	Celsius	9/5 (then)	Fahrenheit	°F	
	temperature	add 32)	temperature		

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Order by SD Catalog No. C13.10: 365/2). Price 10¢.  
 \*1 in = 2.54 cm (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10: 286.

★ U.S. GOVERNMENT PRINTING OFFICE: 1972 O-488-460

Page 8  
FRAMINGHAM RADIO CLUB

Framingham, Mass.

I would like to participate in Field Day this year and qualify as follows:

Name \_\_\_\_\_ Call \_\_\_\_\_ Class \_\_\_\_\_

Address (St.) \_\_\_\_\_ Telephone \_\_\_\_\_

City \_\_\_\_\_ Avg. Code Speed \_\_\_\_\_ WPM \_\_\_\_\_

Transmitters 1:

2.

3.

Receivers: 1.

2.

3.

Generators:

Aluminum Ladders \_\_\_\_\_ Length \_\_\_\_\_ Plastic Sheeting \_\_\_\_\_ Sq.Ft.

Long Extension Cords: 100' \_\_\_\_\_ 50' \_\_\_\_\_ Others \_\_\_\_\_ Ft.

Tents/size \_\_\_\_\_ Sleeps \_\_\_\_\_

Own Sleeping Bag must be furnished. \_\_\_\_\_ Cots \_\_\_\_\_

Other equipment: \_\_\_\_\_

Constructive Comment: \_\_\_\_\_

I would like to work the \_\_\_\_\_ Meter band on \_\_\_\_\_ (mode)...

Note: Important things to bring with you are: Money for food. (Bringing own lunch is not recommended due to the possibility of food poisoning caused by lack of refrigeration and/or extreme weather changes.) Tools, spare parts, tubes, connectors, soldering iron, solder, lots of rope for guying and tent repairs, glass or paper cups for drinking (water) or brushing teeth in morning. rain clothes, warm jacket. Card tables, small light for operating, several pencils, and anything else that will make your week-end fun.

IMPORTANT: THE USE OF HARD LIQUOR OR FIGHTING WILL BE CAUSE FOR IMMEDIATE DISMISSAL FROM THE FIELD DAY SITE.



NASA LAUNCHES LOW ALTITUDE SPACE PROBE

by Al Werner WALODY

With the launch and placing into orbit of the maneuverable atmosphere EXPLORER C on December 16, the lower limit for spacecraft and the upper limit for aircraft now almost coincide. The spacecraft was designed to function at perigee altitudes as low as 74.6 miles (393,520 ft). It is interesting to note that conventional aircraft can fly at altitudes of 7.6 miles (40,000 ft); the United States U2 flew at 13.3 miles (70,000 ft); the X2 experimental aircraft reached heights of 23.9 miles (126,000 ft); and only a few years ago, the X15 flew at heights of nearly 66 miles (350,000 ft.) A spacecraft in a circular orbit of 120 Km altitude (74.6 miles) would be pulled down by atmospheric drag and eventually be destroyed by atmospheric heating. The EXPLORER-C elliptical orbit with apogee of 300 Km circumbents this problem. However, a substantial boost is required periodically to offset apogee decay caused by atmospheric drag. Up to this time, this area of the atmosphere has been probed only a few minutes at a time by sounding rockets and only at widely separated points, mostly in the Western Hemisphere. An extensive worldwide investigation of this region will have significant impact on the scientific community's effort to construct models of the earth's outer environment and also add to our understanding of the complex energy-conversion process which control this environment. An interesting comparison can be made between the range of heights above the earth of the explorer-C spacecraft (75-185 Mi) and various atmospheric phenomena. For example: Aurora heights range between 50-225 miles, noctiluscent clouds about 45-50 miles. Meteors generally burn up at heights of 40-75 miles, the "D" region of ionization is at about 50 miles, the "E" region at about 75 miles, the "F-L" region (ionized oxygen) centers at 125 miles and the "F-2" region (ionized nitrogen) at about 160 miles. Both "F" regions, which together comprise the ionosphere, consolidated into one layer at night at which time they have only a single effect for reflecting radio waves.

\*\*\*\*\*

OUR FIRST ADVERTISER

The Club would like to thank Arthur of Maran Printing Service, Inc. for providing the Rag Chew Net Certificates at a no charge basis. I have known Arthur for several years and I urge anyone needing printing to contact him. He will offer you fast dependable service and at reasonable rates. Please mention the FRC to him.

 Maran printing service, inc.

*Designers of Fine Offset and Letterpress Printing*

1406 MASSACHUSETTS AVENUE  
ARLINGTON, MASSACHUSETTS 02175  
Telephone 617-648-9403

## AMSAT

The launch of Oscar 7 is scheduled for early March. The satellite will carry two translators with 150 MHz. and 440MHz. input. Outputs are on 10 meters and 2 meters.

de Hamsan

\*\*\*\*\*

## NEW REPEATER DIRECTORY

The latest ARRL Repeater Directory is a 35 page, six by nine booklet which users will find very handy, particularly when planning to travel. Send a large stamped, self-addressed envelope with 30¢ postage to:

American Radio Relay League  
225 Main Street  
Newington, Conn. 06111

de World Radio News

\*\*\*\*\*

## TEN METER BEACONS---

For those interested in 10 meters, here is a list of beacons operating from several locations around the world. If you hear one of these beacons, you can be sure that 10 is open to that part of the world. Beacons usually transmit a steady carrier with the call sign given every few minutes as an ID on CW. Also, you might check WIAW when they are on with code practice or bulletins on 28.080 MHz. Times are in QST. If you know of additional beacons or corrections to the list, let us know.

DLØIGI	28.195	ZC4CY	28.180
3B8MS	28.200	VE3RMR	28.175
JALIGY	28.190	VE3TEN	28.175
GB3SX	28.185	DLØAR	29.000

de HARC Bulletin  
Kansas City, Mo.

\*\*\*\*\*

Jr. Ops are like canoes,  
To handle and to steer,  
Managed with more ease...  
When paddled from the rear.  
de ARNS

Jr. Op.: "I love you for a  
hundred reasons."  
YL: "My goodness."  
Jr. Op.: "No, that's not one  
of them!"

de ARNS

For the OM who enjoys a "snort" once in a while, remember that a mixture of brandy and water spoils two things. de ARNS

With the fuel shortage we get a blanket and curl up, "Snug as a bug at the rig." They wrote songs years ago about the fuel shortage. Remember this one? "Freeze a Jolly Good Fellow."

## QUESTION AND ANSWER TIME

1. It takes the Earth one \_\_\_\_ to go around the Sun.
2. It takes the moon one \_\_\_\_ to go around the Earth.
3. The Earth turns once each \_\_\_\_.
4. If you were on the Moon you would weigh \_\_\_\_ (more or less) than on Earth?
5. What color does the sky become in space?
6. The Sun is really a \_\_\_\_ (planet, satellite, star or moon.)

Answers on next page.

## ANSWERS

1. one year
2. one month
3. day
4. less
5. black
6. star

\*\*\*\*\*

## THE MEASURE OF A MAN

NOT--"How did he die?"

BUT--"How did he live?"

NOT--"What did he gain?"

BUT--"What did he give?"

*These are the units to measure the worth of a man as a man, regardless of birth.*

NOT--"What was his station?"

BUT--"Had he a heart?"

AND--"How did he play his God-given part?"  
*"Was he ever ready with a word of good cheer? To bring back a smile, to banish a tear?"*

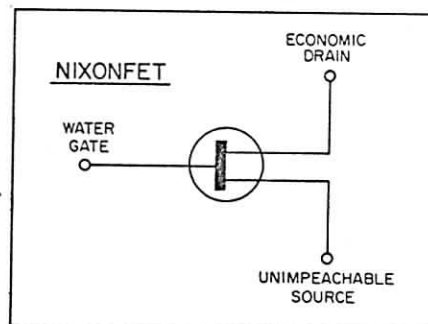
NOT--"What was his church?"

BUT--"Had he befriended those really in need?"

NOT--"What did the sketch in the newspaper say?"

BUT--"How many were sorry when he passed away?"

## From the Watergate . . .



Our research staff recently uncovered a new semiconductor device the NIXONFET. We thought you might find it interesting and have drawn a schematic of the device below.

P.S. It works in a fully depleted mode.

Ray N. Lubow  
 Senior Member of Technical Staff  
 Calculator Products Group

\*\*\*\*\*

A battery that produces eight times more electrical energy and lasts twice as long as conventional dry cells has been developed by GTE Laboratories at Waltham, Mass. Still in the experimental stages, the revolutionary new battery will produce higher voltage and power output than conventional dry cells. The battery includes absolutely no leakage of power, thus giving longer shelf life, and a high degree of voltage stability. This should be great for the two-meter portable rigs.

Rockwell International has acquired the Collins Radio Co. Regency may acquire the communications division of Hallicrafter.

Clothing and footwear manufacturers are using automated laser fabric cutters. Some of these cost up to \$600,000.00.

## F.C.C. PROPOSES MORE LIBERAL CB ANTENNA RULES---

The F.C.C. has released a Proposed Notice of Rule Making which would increase the maximum antenna height allowed for Class D Citizens Band stations from 20 feet to 60 feet. The new rules would permit installation where, "The highest point of the antenna or its supporting structure does not exceed 60 feet above ground level and the highest point does not exceed one foot in height above the established airport elevation for each 100 feet of horizontal distance from the nearest point of an airport runway." (Wonder how many CBers will have to lower their antenna to conform to this new rule if passed?)

de Ham News -- Blue Grass Amateur Radio Club

## SET YOUR GMT CLOCK IN THE HAM SHACK---

Did you know that the beginning of 1974 was delayed one second to keep clocks accurate? It seems the old earth is slowing down on its rotation speed. Since 1958 the earth has lost 11 seconds as compared to the atomic clock, which does not deviate a second in 20,000 to 60,000 years. So, the hams that are accurate time keepers in their logs should delay that clock by one second.

by WA4ZSQ de Ham News

## POEM OF THE MONTH---

One day as I tuned up with glee  
A relay stuck open on me.

I reached inside  
And the lightning did slide  
Now I'm just a poor silent key.

by K9PKQ/K9GSC de Yellow Thunder's Smoke Signals

\*\*\*\*\*

## FLASH!!!

A 1974 ARRL Handbook will be awarded as a door prize at the March 14 meeting.

ALSO a surprise package will be raffled off at the meeting. Raffle tickets will be 25¢ each. Jim K1UUM tells me that the value of the surprise package is \$25.

\*\*\*\*\*

## CODE CLASSES

The FRC presently has eleven people in code class which are being held both in Framingham and Milford, Mass. Many thanks to Ed WALAGQ and Tom WALOTG for helping out. We can handle more people so let us know if you know someone who would like to join the classes.

\*\*\*\*\*

## HELLLP!!!

The Club needs your help in lining up speakers for our meetings. Let a Club officer know if you have a candidate.

ENZO ROTATORI WALPYE  
EDITOR